

DE MUNDI
SYSTEMATE

	Distant Co net. a Sole	Long. Collect	Lat. Collect	Long. Obs.	Lat. Obs.	Differ. Long.	Differ. Lat.
Dec. 12	2792	gr. 6.32	gr. 8.18 $\frac{1}{2}$	gr. 6.31 $\frac{1}{2}$	gr. 8.26	+1	-7 $\frac{1}{2}$
29	8403	gr. 13.13 $\frac{1}{2}$	gr. 28.0	gr. 13.11 $\frac{1}{2}$	gr. 28.10 $\frac{1}{2}$	+2	-10 $\frac{1}{2}$
Feb. 5	16669	gr. 17.0	gr. 15.29 $\frac{1}{2}$	gr. 16.59 $\frac{1}{2}$	gr. 15.27 $\frac{1}{2}$	+0	+2 $\frac{1}{2}$
Mar. 5	21737	gr. 29.19 $\frac{1}{2}$	gr. 12.4	gr. 29.20 $\frac{1}{2}$	gr. 12.3 $\frac{1}{2}$	-1	+ $\frac{1}{2}$

Postea vero *Halleius* noster orbitam per calculum arithmeticum accuratius determinavit, quam per descriptiones linearum fieri licuit; & retinuit quidem locum nodorum in ϖ & ϖ 1st. 53', & inclinationem plani orbitæ ad eclipticam 61st. 20 $\frac{1}{2}$ ', ut & tempus perihelii cometæ Decemb. 8^d. 0^h. 4': distantiam vero perihelii a nodo ascendente in orbita cometæ mensuratam invenit esse 9st. 20', & latus rectum parabolæ esse 2430 partium, existente mediocri solis a terra distantia partium 100000. Et ex his datis, calculo itidem arithmetico accurate instituto, loca cometæ ad observationum tempora computavit, ut sequitur.

Tempus verum.	Distantia Cometæ a ☉	Long. comp.	Lat. comp.	Errors in Long.	Errors in Lat.
d. h. m.		gr. m. s.	gr. m. s.		
Dec. 12. 4.46	28028	gr. 6.29.25	gr. 8.26.0 Bor.	-3.5	-2.0
21. 6.37	61076	gr. 5.6.30	gr. 21.43.20	-1.42	+1.7
24. 6.18	70008	gr. 18.48.20	gr. 25.22.40	-1.3	-0.25
26. 5.21	75576	gr. 28.22.45	gr. 27.1.36	-1.28	+0.44
29. 8.3	14021	gr. 13.12.40	gr. 28.10.10	+1.59	+0.12
30. 8.10	86661	gr. 17.40.5	gr. 28.11.20	+1.45	-0.33
Jan. 5. 6. 1 $\frac{1}{2}$	101440	gr. 8.49.49	gr. 26.15.15	+0.56	+0.8
9. 7. 0	110959	gr. 18.44.36	gr. 24.12.54	+0.32	+0.58
10. 6. 6	113162	gr. 20.41.0	gr. 23.44.10	+0.10	+0.18
13. 7. 9	120000	gr. 26.0.21	gr. 22.17.30	+0.33	+0.2
25. 7.59	145370	gr. 9.33.40	gr. 17.57.55	-1.20	+1.25
30. 8.22	155303	gr. 13.17.41	gr. 16.42.7	-2.10	-0.11
Feb. 2. 6.35	160951	gr. 15.11.11	gr. 16.4.15	-2.42	+0.14
5. 7. 4 $\frac{1}{2}$	166686	gr. 16.58.25	gr. 15.29.13	-0.41	+2.10
25. 8.41	202570	gr. 26.15.46	gr. 12.48.0	-2.49	+1.14
Mar. 5. 11.39	216205	gr. 29.18.35	gr. 12.5.40	+0.35	+2.24

Apparuit etiam hic cometa mense *Novembri* præcedente & *Coburgi* in *Saxonia* a D^{no}. *Gottfried Kirch* observatus est diebus mensis hujus quarto, sexto & undecimo, stylo veteri; & ex positionibus ejus

LIBER
TERTIUS.

ejus ad proximas stellas fixas ope telescopii nunc bipedalis nunc decempedalis satis accurate observatis, ac differentia longitudinum *Coburgi* & *Londini* graduum undecim & locis fixarum a *Poundio* nostro observatis, *Halleius* noster loca cometæ determinavit ut sequitur.

Novem. 3^d. 17^h. 2', tempore apparente *Londini*, cometa erat in Ω 29st. 51' cum lat. bor. 1st. 17'. 45''.

Novem. 5^d. 15^h. 58' cometa erat in ϖ 3st. 23' cum lat. bor. 1st. 6'.

Novem. 10^d. 16^h. 31' cometa æqualiter distabat a stellis leonis σ ac τ *Bayero*; nondum vero attigit rectam easdem jungentem, sed parum abfuit ab ea. In stellarum catalogo *Flamstediano* σ tunc habuit ϖ 14st. 15' cum lat. bor. 1st. 41' fere, τ vero ϖ 17st. 3 $\frac{1}{2}$, cum lat. austr. 0st. 34'. Et medium punctum inter has stellas fuit ϖ 15st. 39 $\frac{1}{2}$, cum lat. bor. 0st. 33 $\frac{1}{2}$. Sit distantia cometæ a recta illa 10' vel 12' circiter, & differentia longitudinum cometæ & puncti illius medii erit 7', & differentia latitudinum 7 $\frac{1}{2}$, circiter. Et inde cometa erat in ϖ 15st. 32' cum lat. bor. 26' circiter.

Observatio prima ex situ cometæ ad parvas quasdam fixas abunde satis accurata fuit. Secunda etiam satis accurata fuit. In tertia, quæ minus accurata fuit, error minorum sex vel septem subesse potuit, & vix major. Longitudo vero cometæ in observatione prima, quæ cæteris accuratior fuit, in orbe prædicto parabolico computata erat Ω 29st. 30'. 22''. latitudo borealis 1st. 25'. 7''. & distantia ejus a sole 115546.

Porro *Halleius* observando quod cometa insignis intervallo annorum 575 quater apparuisset, scilicet mense *Septembri* post cædem *Julii Caesaris*, anno *Christi* 531 *Lampadio* & *Oreste Coss.* anno *Christi* 1106 mense *Februario*, & sub finem anni 1680, idque cum cauda longa & insigni (præterquam quod sub mortem *Caesaris*, cauda ob incommodam telluris positionem minus apparuisset:) quæsit orbem ellipticum cujus axis major esset partium 1382957, existente mediocri distantia telluris a sole partium 100000: in quo orbe utique cometa annis 575 revolvi possit. Et ponendo nodum ascendentem in ϖ 2st. 2'; inclinationem plani orbis ad planum eclipticæ 61st. 6'. 48''; perihelium cometæ in hoc plano ϖ 22st. 44'. 25''; tempus æquatum perihelii *Decem.* 7^d. 23^h. 9'; distantiam perihelii a nodo